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ABSTRACT

The question of why adult learners prefer particular course design patterns was studied. During fall 1981, 281 adult continuing professional education students at Cleveland State University and at several U.S. military bases in West Germany and Italy were studied. The research was based on two previous studies: one tested hypotheses generated from theories of adult learning, and the other investigated the relationships between learning preferences and sex, life phase, and learning styles. This third research phase employed both qualitative and quantitative methodologies. Using the Course Design Preference Survey, respondents selected a preference for course design from among five choice design elements and explained their preferences. In addition, respondents completed the Learning Style Inventory, which identifies preferred approaches to learning: the degree of activity versus reflection, and preference for abstract conceptualization versus concrete experience. Through a content analysis of written rationales provided by respondents, eight major reasons for learner interaction preferences were identified, as well as 15 combinations of reasons. Results support the idea that diversity of learner interaction preferences is a predictable and legitimate phenomenon in postsecondary education. (SW)

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Learner Preferences in Postsecondary Education: The Why Question

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Abstract

The idea that adults are capable and desirous of participating in the design, conduct, and evaluation of their own learning experiences has been stressed in the literature of adult education. Two previous studies of learner preferences focused on the degree of involvement in course design desired by adult learners and the relationships between learner preferences and learning style, age, sex, and occupation. The present investigation addresses the question, "Why do adult learners prefer particular course design patterns?" Through a content analysis of written rationales provided by respondents, eight major reasons for learner interaction preferences were identified, as well as fifteen combinations of reasons. The study supports the idea that diversity of learner interaction preferences is a predictable and legitimate phenomenon in postsecondary education.

The idea that adults are capable and desirous of participating in the design, conduct, and evaluation of their own learning experiences has been repeatedly stressed in the writings of adult learning theorists such as Bergevin (1967), Knowles (1973), Messick (1976), and Apps (1981). Two previous studies by Schuttenberg, Gallagher and Poppenhagen (1982) and Schuttenberg, Gallagher and Karger (1983) investigated some of the implications of this purported desire for involvement on the part of adult learners. These two studies focused on the degree of involvement in course design desired by adult learners participating in continuing education courses and the relationships between learner preferences and learning style, age, sex and occupation. Though few adult respondents in these studies indicated the desire to assume major responsibility for course design, the majority expressed the desire for some degree of influence in the decision-making process. There were also some differences in learning interaction preference between older and younger age groupings and between males and females.

The present investigation represents a continuation of the two previous studies, addressing the question of "Why do the adult learners prefer particular course design patterns?" Although a number of studies have focused on adult preferences for certain subject areas and reasons for participation in adult education (Boshier, 1971; Burgess, 1971; Grotelueschen et al., 1981), little previous research has been conducted on preferences for learner-instructor interaction patterns.

Long and Hiemstra (1980) point out that the College Entrance Examination Board has identified as a needed area of study the conditions

that facilitate or impede adults' participation in and benefit from learning opportunities. They also note that only recently have researchers begun to ask the difficult "why" questions in addition to "what, where, and when" questions.

This present study represents a departure from the previous phases of this research, not only in the questions asked, but also in that it utilizes an inductive approach. By using such an approach it was felt that unanticipated or previously unaddressed reasons for adult learning interaction preferences might be revealed. These, in turn, might generate fruitful directions for future research and practice in postsecondary education.

In addition, the present study seeks to determine whether a relationship exists between stated reasons for course design preferences and the variables of age, sex, and learning style.

Since there was no opportunity to verbally interact with the respondents in order to clarify the meanings of their rationales, the researchers' interpretation of their written comments formed the basis for the categories which were identified. While this inability to question the respondents was obviously a limitation, the methodology was planned in such a way that the researchers' personal biases and the forcing of categories were least likely to occur. Procedures are described in a later section of this paper.

Review of Literature

In the two earlier studies of adult learner preferences (Schuttenberg et al., 1982, 1983), a model of alternative course designs was required

for the investigations. A "Course Design Continuum," identifying five major elements in the design of a learning experience (objectives, content, sequence, methods, evaluation) and five possible approaches for instructor-learner interaction in each element (1 - instructor-centered planning, 2 - planning with learning options, 3 - tentative instructor planning, 4 - instructor-learner collaborative planning, 5 - learner-centered planning) was conceived to meet this need.

The Course Design Preference Survey (CDPS), based on the Course Design Continuum, was developed to enable respondents to indicate their preferred degree of active involvement (1, 2, 3, 4, or 5) in each of the five course design elements. A national panel of five experts,[1] active in the field of adult and continuing education, reviewed the Continuum model and the CDPS instrument regarding its face validity and made recommendations for modifications.

A test-retest reliability coefficient of .699 for the CDPS was established with a sample of more than one hundred continuing professional education students in the fields of allied health, business, education, and engineering. Suggestions from the panel of experts, ideas from respondents, and factor analysis data from this phase of the study were used to refine the CDPS instrument.

As part of the studies, respondents also completed a version of the Learning Style Inventory (LSI), developed by Kolb (1976). The LSI identifies preferred approaches to learning in terms of two dimensions: degree of activity versus reflection, and preference for abstract conceptualization versus concrete experience. Within the first dimension

are the two learning modes of Active Experimentation (AE) and Reflective Observation (RO). The AE learning style stresses a "doing" orientation that prefers to try things out and to modify behavior according to results, while the RO approach emphasizes careful observation rather than involvement, and learning is best accomplished by considering and comparing ideas. The second dimension includes the learning modes of Abstract Conceptualization (AC) and Concrete Experience (CE). CE learners rely heavily on feeling-based judgements and prefer involvement in specific learning episodes. Learners who tend toward AC, on the other hand, are more rational and conceptual in their approach to learning.

The first study (Schuttenberg, Poppenhagen & Gallagher, 1982) dealt with the learning preferences of 281 adult learners (mean age, 34.8) taking courses in the fields of allied health, business, education, engineering, and general administration. The distribution of responses to the five items of the CDPS is shown in Table 1. More than two-thirds of the responses indicated a preference for some degree of interaction with the instructor in the design and conduct of classroom education experiences (that is, options other than "instructor-centered planning" were selected). The greatest amount of learner influence was preferred in the element of teaching/learning methods, while the least amount of learner influence was preferred in the element of content sequence.

Insert Table 1 about here

No significant correlations were found between CDPS factor scores and the individual difference variables of age, income, educational level, and number of continuing education course taken. Multiple R's predicting CDPS factor scores from these variables were not significant. Nor were any significant differences found among means on CDPS factor scores when respondents were compared by sex, race, or area of professional study (allied health, business, education, engineering, and general administration).

In addition, no relationships were found between respondents' learning styles, as assessed by the LSI, and their learning preferences, as measured by the CDPS.

The second study (Schuttenberg, Gallagher and Karger, 1983) included 165 learners all above the age of 60 years. In addition, the responses of the older group of learners were compared to those of the younger groups. Table 2 shows the distribution of responses to the CDPS items, by sex, for the 165 older learners. Generally speaking, the older group of adult learners appeared to prefer somewhat more instructor direction than did the younger group. With the older group, however, there were some variations in responses between males and females.

Insert Table 2 about here

Chi square analyses of the relationship between sex and course design preferences revealed statistically significant relationships for the elements of course content and evaluation procedures. As shown in Table 2, female respondents within the older sample desired a significantly greater degree of involvement in these two areas of course design than did male respondents.

Chi square tests were also conducted to investigate relationships between learning style categories and CDPS responses. As in the earlier study of younger adult learners (Schuttenberg, Gallagher and Poppenhagen, 1982), no significant relationships between learning style and course design preferences were found. Nor was there any relationship between respondents' educational level and their course design preferences in the older sample.

Within the older group, no statistically significant relationships between age and CDPS responses were revealed. In addition, none were found between age or educational level and learning style preferences, as measured on the LSI.

As noted earlier, the purpose of the present study is to build on the two previous studies by investigating why adult learners prefer the various approaches to instructor-student interaction across the Course Design Continuum. While research data on this question are lacking, the literature on adult learning provides some insights regarding why adults may prefer various instructor-learner interaction patterns. In this section of the paper, a number of possible reasons for adult learner preferences are inferred from the literature. They may be compared to

the actual reasons given by adult learners in the present study reported in a later section.

First, why might adults prefer instructor-centered approaches in their classroom learning experiences? Knowles (1980) suggests that even though adults may be completely self-directing in most areas of their lives, their earlier educational experiences under directive teachers may cause them to assume a dependent stance when they enter classrooms later in life. Another carryover from previous experience, Knowles maintains, may be a perception that they are not very intelligent, at least as far as academic pursuits are concerned. Such a self-perception may cause them to prefer more passive interaction patterns in learning situations.

Peterson (1983) has a similar idea regarding older learners. For some, he maintains, internalized negative stereotypes of the intellectual capabilities of older persons may produce a low self-concept in the learning situation. Such persons would not be likely to prefer much interaction with an instructor.

Lebel (1978) is another author who postulates that elderly learners may have deteriorating self-concepts and, hence, desire to return to a more subject-centered orientation typical of youth. The implication is that elderly learners may prefer instructor-directed learning sessions because of their perceptions of the instructors' superior knowledge.

In working with politically oppressed adult learners in South America, Freire (1970) describes them as people who "call themselves ignorant and say the 'professor' is the one who has the knowledge and to whom they should listen" (p. 49). Perhaps, like the politically

oppressed citizens in third-world nations, some American adults have been educationally oppressed by earlier experiences in the school system, and, therefore, they feel that "teacher knows best."

In a departure from the "instructor-as-expert" theme, Peterson (1983) suggests that learners born before 1920 had their social values shaped by the Great Depression. They may therefore have a conservative philosophy and a bent to conform to social pressures. Their memories of education may be that it involved "rote memorization, strict discipline, academic rigor, classical content, and limited relevance" (p. 148). Even now, they may expect education to be a similar process in which their participation will not be welcome.

Douvan (1981), in discussing some of the problems encountered by middle-aged adults returning to classes in colleges and universities, focuses on "the infantalizing aspects of the student role, of returning to a role that demands compliance and continual submission of the self to judgment and evaluation by others" (p. 200). The reason that some adults may "prefer" instructor-directed classes is that they feel that these are the correct and expected roles for instructors and students in formal learning situations.

In an article entitled "1984 Anticipated," McCants (1981) proposes that adult learners currently in their thirties - especially women who are competing for leadership positions in organizations - will have a consumer mind-set and will make rigorous demands on adult educators, particularly in the area of content knowledge. The assumption of this article seems to be that such adult learners will prefer

instructor-directed classes because they perceive that the role of the instructor should be to transmit knowledge.

In the context of a discussion of lifelong learning in the professions, Houle (1980) raises some points related to adult learner preferences. Practitioners who have excelled at mastering information presented by expert teachers may prefer renewed exposure to the instructor-directed model believing that transmission of knowledge is the only legitimate role of any instructor.

Finally, Knudson (1980), in proposing an approach to adult education termed "humanagogy," suggests that adults' perceptions of the learning experience, and, by implication, their learner interaction preferences, are determined in large part by the quality of previous educational experiences. Adults who are psychologically fixated on earler directive learning experiences would likely prefer similar classroom interaction patterns on the assumption of teachers' authority. On the other hand, adult learners with experiences of more shared control of learning would be likely to prefer collaborative modes on the assumption that involvement leads to a better quality of learning.

This idea brings us to a consideration of some of the possible reasons adult learners may have for preferring more student-directed learning approaches, or at least collaborative interactions with instructors in the design and conduct of learning programs. One set of potential reasons seems to involve the maturity of adults and their desire for active participation. In an article discussing the relationship of adult learning theory to teaching styles, Knowles (1972)

suggests that it is incongruent with adults' self-concept to have learning decisions or activities imposed upon them. The implication is that adults would choose shared decision making with classroom instructors because the adults view themselves as knowledgeable and capable of a degree of self-direction in the learning process.

In a similar vein, Messick (1976) points out that students in higher education should assume more of the responsibility for the planning of their learning experiences. He argues that such students do, or at least should, see themselves as educational decision makers, able to select from among a variety of subjects and learning treatments. Apps (1981) reported that several outstanding professors who teach adult students stressed the need to invite these students to contribute their knowledge and experience in the learning situation. The implication once again is that adults see themselves as knowledgeable, and they desire to share learning responsibilities with their instructors.

As discussed earlier, Houle (1980) suggests that prior experience may play a role in learner preference. For adults who have had success in learning from mentors or colleagues, the desired role of any instructor may be seen as a collaborative one. Hence, such adult learners may indicate a preference for more shared interaction within the classroom.

A third reason has to do with the need for adults to achieve personal or professional learning goals. In a study of adult students in a large metropolitan community college, Parks (1983) investigated the degree to which the educational programs offered facilitated the developmental tasks of adults at various life transition periods. One of the

implications that he drew from his study was that educational institutions should provide options to allow students to satisfy their various needs. "Since adults experiencing a life cycle transition are in a period of evaluation and decision-making," he stated, "they will be looking for alternative and sometimes innovative avenues to achieve their educational and personal developmental goals" (p. 9). Some of these avenues would presumably be through participation in the planning, conduct, and evaluation of their classroom learning experiences.

Gross (1977) suggests some reasons adults may have for preferring options other than the instructor authority model. In their thirties, he points out, adults often wish to tailor their learning to their needs for getting ahead occupationally. Later in the life cycle, they may have a greater desire to become involved with other people or to engage in learning experiences in order to enhance or express their creativity.

Caffarella (1983) studied the reactions of students who had experienced the use of learning contracts in graduate coursework. One of her principal findings was that the majority of respondents to her survey indicated that having more responsibility for planning and conducting their learning experience assisted them in blending their own learning needs and desires with the course requirements. It may be inferred that the need to accomplish personal learning goals may be an important reason that some adults prefer less directive instructor behavior in the classroom.

Methodology

This third phase of the research employed different techniques of data analysis from that of the previous two phases. In the first study,

as described earlier, hypotheses generated from theories of adult learning were tested using a deductive approach. Quantitative data were gathered through the Course Design Preference Survey and the Learning Style Inventory and analyzed by means of multiple regression analysis. The second study also represented a quantitative research approach. Chi square analyses were conducted to determine the relationships between learning preferences and sex, life phase, and learning styles. This third phase of the research, however, combines both qualitative and quantitative research procedures in order to capitalize on the strengths of both approaches while attempting to minimize their weaknesses. Long and Hiemstra (1980) have recommended such a combined approach for similar reasons. As they point out, qualitative data and grounded theory analysis are required in studies such as the present one, where the emphasis is on developing an analytical framework to explain human interaction. Quantitative data, on the other hand, are more useful when focusing on static variables.

The CDPS, which served as the source of the data in the previous studies, required the respondents to select a preference for course design from among five choices for each of the five design elements. Respondents were also asked to explain why they had selected each particular response chosen. It is these written comments that formed the raw data for this study.

One of the major characteristics of qualitative research is the inductive approach in which theory is built from the data gathered rather than the reverse (Pool, 1959; Rockhill, 1982). The researchers in this

study adhered to this approach by refraining from formulating rigidly defined categories in advance. Rather, the categories were allowed to develop as the data were examined. This approach is similar to Darkenwald's (1980) description of field research where he states that grounded theory is an inductive approach to research that focuses on building theory in the data rather than simply testing theory with the data.

Content analysis was the procedure used for analyzing the written responses to the "why" questions. Holsti (1969) defines content analysis as "any technique for making inferences by objectively and systematically identifying specified characteristics of messages" (p. 14). Krippendorff (1980) states that content analysis is a research technique for making replicable and valid inferences from data to their context (p. 21).

In the present research study, graduate assistants reproduced all of the written responses on individual cards. A sample of 100 cards from the total response pool was first reviewed to determine if obvious similarities or differences would surface, and tentative categories were noted. As Darkenwald (1980) points out, perhaps the most difficult task is the identification of categories, which he defines as basic theoretical concepts that enable researchers to explain and predict behavior. The final categories which emerged from this research each represented a concept or rationale for preferring a particular instructor-student interaction in relation to course design. Through discussion of each written response, the researchers were able to minimize individual opinions and arrive at agreed-upon categorizations.

As previously mentioned, the research reported here has both qualitative and quantitative characteristics. Pool (1959) discusses both types of content analysis. In accordance with his definitions of qualitative content analysis, this research initially used a flexible procedure for making coding judgements without consideration for the frequencies per category. The emphasis was placed on the validity of the category identification. However, later in this research, occurrences of responses within categories were counted and statistical analysis was conducted on the basis of frequency, a method more characteristic of quantitative content analysis. Other statistical tests were also employed in studying the relationships between written responses and demographic and learning style variables. The rationale for this combined qualitative-quantitative analysis procedure is perhaps best offered by Holsti (1969). He suggests that while a single qualitative judgement may be made without tabulating the frequency with which any content attribute appears, it may be advantageous to report the findings via some form of quantification in order to expand that judgement. It is this blend between the two methodologies that has been utilized here.

Sample

During the Fall, 1981, the CDPS and LSI were administered to 496 adult continuing professional education students at Cleveland State University, Cleveland, Ohio, and at several United States military installations in West Germany and Italy. They were distributed at class sessions, and the completed instruments were either collected at the next class session or, if this was not feasible, they were returned by mail. In all, 281 usable instruments (57%) were returned.

Ages of respondents ranged from 17 to 65, with a mean age of 34.8 and a standard deviation of 9.3. There were 62% women and 38% men in the sample. Respondents' fields of professional study were allied health, business, education, engineering and general administration. Respondents in Europe were military and civilian employees of the U.S. Government enrolled in Masters level programs in areas of general administration. Only about one-third of those in the European sample were actually military personnel. The majority were dependents and civilians employed by organizations under contract to United States Forces. The subjects of this phase of the investigation had all chosen to participate in continuing professional education credit courses.

The second phase of the study employed a sample of students 60 years of age and older, who participated on a no-fee basis in a non-credit program (Project 60), attending regular undergraduate and graduate courses at Cleveland State University during the 1981-82 academic year. Surveys containing the CDPS and LSI were mailed to the 361 participants in the Project 60 program, and 193 (53%) were returned. Of the survey forms returned, 165 were usable. In the Project 60 sample, 53% were female and 47% were male. The mean age of this group was 68.4 with a standard deviation of 5.2 years. Nine percent of this sample had less than a high school diploma, 46% had completed high school, but had less than a college degree, and 44% had received a bachelor's degree or higher. Fifty-three percent of the males and 41% of the females had completed four years of college or more.

While members of both samples were enrolled in continuing education courses, the reasons for enrolling varied. Those participants in the Project 60 sample were not enrolled for credit nor for career advancement, a factor which may have affected preference and rationale for preference.

The total sample, consisting of 446 adult learners, was made up of the Project 60 respondents combined with the respondents of the earlier learner preference study. This sample was 58% female and 42% male, with a mean age of 46.9 and a standard deviation of 7.7 years.

The CDPS asked respondents to explain briefly why they chose the response they did for each of the five items of preference. As the write-in responses were optional, not all respondents provided written rationales, and some did not write in rationales for all five items. Of the first sample (N=281), 256 respondents (91%) wrote in rationales for at least one CDPS item. In the Project 60 sample (N=165), 103 respondents (62%) provided written rationales. For the total sample, therefore, the analysis reported in this paper is based on information from 359 (81%) of the respondents and on 1462 written responses, which represent 66% of the potential responses.

Findings

From the content analysis of the 1462 written accounts in which respondents explained why they had selected their learner interaction preferences on the CDPS, eight major response categories emerged. A description of each category is given below along with an example of a response from that category. For additional samples of responses in each of the eight categories, see the Appendix.

1. Instructor knows best. The instructor possesses knowledge or expertise the learner does not have.

   Ex. "The instructor is the expert and should determine content."

This category seems to be related to French and Raven's (1960) concept of Expert power, in which leaders influence others by virtue of the information the leaders possess.

2. Instructor should be authoritative. The instructor represents the educational institution, and, therefore, as part of that role, he or she should provide structure in order to promote efficiency of learning and to reflect the authority of the position.

   Ex. "I believe the instructor is the leader and director of the course and his ideas should be followed."

This category seems similar to French and Raven's concept of Legitimate power, in which leaders influence others as a result of authority vested in them by their organizational position.

3. Students need structure. In order to learn effectively and to avoid inadequate or inefficient application to their studies, students need the guidance and direction of the instructor.

   Ex. "As a learner, I would tend to take the easiest objectives. I need the extra push of set objectives."

This category is similar to category 2, in that it recognizes the utility of instructor direction. However, while category 2 bases this recognition primarily on the rights and needs of the organization, category 3 bases it primarily on the rights and needs of the learners.

4. Make it useful. It is important for the students to tailor the learning process and outcomes to meet their own needs, goals, and values or to complement their current knowledge.

Ex. "An adult will direct his/her education based upon need, interest, and applicability in individual's circumstances."

5. Want to be involved. Students wish to be active rather than passive in the learning situation because involvement leads to better learning for adults.

Ex. "The instructor should know that much variation exists on how we learn . . . I learn best from a visual activity related approach - not all do!"

Response category 5 is almost the converse of category 3, where the idea was that activity was desirable on the part of the instructor.

6. Instructor should be responsive. The role of an instructor who works with adult learners should emphasize flexibility in understanding and meeting the needs of the learners.

Ex. "The instructor should be prepared to change methods because of needs."

Response category 6 seems similar to category 2 in that it is related to the instructor's role. In category 6, however, that role is perceived as needing to be student-centered rather than instructor-centered. In both response category 6 and response category 4, the element of learner needs is present. In category 6, however, action is required by the instructor to meet these needs, whereas in category 4, action is required by the learner.

7. It all depends. Response may vary according to situational characteristics.

Ex. "My answer depends on the knowledge level of the learners and their learning needs."

As suggested by the example, persons giving category 7 responses usually indicated the assumptions they were making in selecting their learner interaction preferences and stated that, with other assumptions, their response might be different.

8. Unknown. Responses in this category were not interpretable because of insufficient information provided, the inclusion of anecdotal material not related to the CDPS item, illogical sentence construction, or illegible handwriting.

Categories 1, 2, and 3 relate logically to the instructor-influence side of the Course Design Continuum, while categories 4, 5, and 6 relate logically to the learner-influence side of the continuum.

In analyzing the written responses, it was discovered that some of them could be classified as "pure" examples of one or another of the eight response categories. Other written responses were seen to contain elements of two of the categories. However, no response was found to have reference to more than two categories.

Tables 3, 4, and 5 show the frequency and percentage of occurrence of the eight major categories of responses and of pairs of categories across all five items of the CDPS. Table 3 reports the data for the instructor-centered categories and combinations, Table 4 reports the data for learner-centered categories and combinations, and Table 5 reports the data for "mixed" combinations, that is, where one category was instructor-centered and the other was learner-centered.

Insert Tables 3, 4, and 5 about here

As was mentioned earlier, the younger sample of respondents (mean age 34.8; N=281) and the older sample of respondents (mean age 68.4; N=165) had, perhaps, different motivations for enrolling in postsecondary coursework, and these differences may have influenced their rationales for course design preference. Table 6 shows the percentage of responses to the three major instructor-centered response categories (categories 1, 2, 3) and the three major learner-centered response categories (categories 4, 5, 6) for both samples of respondents. Inspection of Table 6 reveals that the older sample utilized the instructor-centered rationale of "Instructor knows best" somewhat more than did the younger sample, while the younger sample utilized the learner-centered rationale of "Want to be involved" somewhat more than did the younger sample. Instances of use of the other four response categories were similar in both samples.

Insert Table 6 about here

In order to evaluate the consistency of the written responses and the respondents' quantitative Likert-scale responses on the CDPS, chi-square analyses were attempted for each CDPS item. Because of small cell sizes, however, chi-square was a valid test only for CDPS Item 1 (Objectives). For this item, the significance level of the relationship was beyond

.0001. While the chi-square statistics are in question for items 2-5, all probabilities were beyond the .0001 significance level, showing a strong tendency for written response categories to relate to the Likert scale responses.

To further assess the significance of these relationships, respondents in each of the three written-response groupings (instructor-centered, mixed, and learner-centered) were compared on their mean Likert scale responses with one-way Analysis of Variance. Table 7 reports the mean Likert scale responses and the significance levels of the ANOVAs for each of the five CDPS items. In all cases highly statistically significant differences in mean responses were found. Sources of the significant differences were assessed by use of Duncan Multiple Range Tests.

Insert Table 7 about here

Although it was expected that the individual written responses would relate logically to the CDPS items selected, the chi-square and ANOVA analyses reported above were conducted to test the validity of the categorization scheme. The high levels of significance (.0001) can be regarded as support for the validity of the categories which emerged from the written response data.

In order to examine the relationship of respondents' sex and the categories of written responses provided, chi-square analyses were performed for each of the five CDPS items. For Items 3 (Sequence), 4 (Methods), and 5 (Evaluation), statistically significant relationships were found between the variables of Sex and Response Category ($p < .031$, .033, and .029 respectively). For CDPS Items 1 (Objectives) and 2 (Content) the relationships approached significance ($p < .055$ and .065 respectively). In each case, male respondents tended to provide more instructor-centered written responses.

To evaluate the relationship of respondents' ages and written response categories, one-way Analyses of Variance were performed for each of the five CDPS items comparing the ages of respondents divided into instructor-centered, mixed, and learner-centered response groupings. Duncan Multiple Range tests were again used to assess the source of significant differences. The ANOVAs revealed statistically significant differences in mean age for Item 1 ($p < .0001$) and for Item 2 ($p < .01$). For Item 1, the Duncan Test indicated that the mean age of the instructor-centered respondents (49.5) differed significantly from the mean ages of the mixed (39.3) and the learner-centered (40.3) groups. For Item 2, the Duncan Test showed the same result (mean ages 46.4, 40.5, and 40.1 respectively).

To investigate the relationship between the written response categories and respondents' learning styles, members of each of the three CDPS written response groupings (instructor-centered, mixed response and learner-centered) were compared on their mean scores on the four learning

modes from Kolb's Learning Style Inventory, using one-way Analysis of Variance procedures. No statistically significant differences were found, indicating no systematic relationship between rationale for learning preference and learning styles, as measured on the LSI.

Discussion

The findings of this research study point to several conclusions. The first is that adults prefer particular student-instructor interaction patterns for a wide variety of reasons as evidenced by the number of response categories emerging from the answers to the "why" questions asked in this study. In addition, a particular individual's preferences may reflect different combinations of reasons. The need to code individual written responses with combinations of categories demonstrates this phenomenon.

Eight major categories of reasons emerged from the data. It is interesting to note that these eight categories supported, in large part, the reasons hypothesized by many of the adult learning theorists cited earlier in this paper. Table 8 shows the reasons proposed in the literature and the categories of responses from this study which support those reasons.

Insert Table 8 about here

Several specific examples will help to illustrate the relationship between the rationales presented in the literature and the categories which emerged in this study. Knowles (1980) suggested that learned dependence on the instructor is a primary reason for adults to prefer instructor-centered learning experiences. This is supported by statements in Category 2 (identified in the present study) like "This style is traditional" or "...that is the instructor's privilege." Statements in Category 1, such as "learning implies [a student's] lack of knowledge," bear a strong similarity to the suggestion of Peterson (1983) that adults may prefer instructor directed learning because of a low self concept of their own intellectual capabilities. A learner-centered rationale from the literature, such as "adults' desire for self direction," was supported by responses such as "I believe learners have a right to share in the decision making" or "...learners know best what methods work for them in mastering content" (Category 5, in the present study.)

Some of the rationales proposed in the literature were not supported by categories identified in this study. Prior success with either instructor-directed or collaborative learning experiences, for example, did not emerge from the respondents' written answers. Neither did negative stereotypes of older persons' learning abilities or intimidation by the educational system appear per se. It is unlikely, however, that some of these reasons would be verbalized by adults in response to the question "Why do you prefer a particular approach to instruction?" Some of the reasons identified in the literature which did not appear in the

responses in this study may very well underlie actual responses given to the why questions. An adult might respond that he or she prefers instructor-centered learning because that is traditional, when the reason underlying the response is that he or she has accepted this situation due to repeated past experiences that reinforced the dominance of the instructor, a dominance that was not allowed to be questioned. The lack of responses from this study directly supporting several of the rationales from the literature highlights the need for further research which goes beyond the question of "why" and probes further into individuals' past experiences and perceptions of educational settings.

As has been shown, many of the reasons given for learner preferences in this study support previously hypothesized reasons from the adult learning literature. However, one category, Category 6 (the instructor should be responsive), was not directly identified in the literature. Category 6 focuses on the instructor and his or her role in a learner-centered learning experience. Interestingly, the respondents placed the responsibility for learner-centered instruction on the instructor. They expected instructors of adults to be flexible in meeting learners' needs. A corollary of this expectation may be that the instructor's emphasis on learner-centered instruction can be either a response to the desires of the students or possibly a means of creating a learner-centered environment because such an environment is more appropriate for adults whether they want it or not!

The position that adults should be more self-directing and, if they are not, they should be actively encouraged to become so is a theme found

in the works of several adult learning theorists and practitioners (Knowles, 1972; Messick, 1976; Schaie & Willis, 1978; Apps, 1981). Future research studies with adult education practitioners may be able to determine the extent to which this position is held by adult educators.

In conclusion, the results of the learner preference studies make it plain that postsecondary educators should anticipate that any group of adult learners is likely to include members with a variety of interaction preferences and that the learners will have a large number of reasons for holding their preferences. Educators, therefore, should be prepared to provide a wide spectrum of approaches to the design, conduct, and evaluation of learning episodes.

From the respondents' learning preferences and rationales for their preferences, it would appear that instructor-centered, collaborative, and learner-centered modes are all legitimate approaches in postsecondary education. The findings of this study do not lend support to theorists who would advocate that all adult learners either do or should approach the learning experience with a particular learning style or preference. Adults have logical reasons for preferring many different approaches to learning.

Expansion of the study of learner preferences might be undertaken. Cross (1981) proposes a CAL (Characteristics of Adults as Learners) model, which includes physiological, socio-cultural, and psychological aspects of adults and part-time/full-time and voluntary/compulsory characteristics of the learning situation. The present learner preference study focused on part-time learners, some of whom were

probably voluntary and others probably compulsory learners. Future studies might examine these variables more closely. Learner preference studies in the future should also investigate the psychological stages of adult development and their relationships to learner interaction preferences.

References

Apps, J.W. (1981). The adult learner on campus: A guide for instructors and administrators. Chicago: Follett.

Bergevin P. (1967). A philosophy for adult education. New York: The Seabury Press.

Boshier, R. (1971). Motivational orientations of adult education participants: A factor analytic exploration of Houle's typology. Adult Education, 21(2), 3-26.

Burgess, P. (1971). Reasons for adult participation in group educational activities. Adult Education, 22(1), 3-29.

Caffarella, R.S. (1983). Fostering self-directed learning in postsecondary education. Lifelong Learning: An Omnibus of Practice and Research, 7(3), 7-10; 25, 26.

Cross, K.P. (1981). Adults as learners. San Francisco: Jossey-Bass.

Darkenwald, G.G. (1980). Field research and grounded theory. In H.B. Long, R. Hiemstra & Associates, Changing Approaches to Studying Adult Education (pp. 63-77). San Francisco: Jossey-Bass.

Douvan, E. (1981). Capacity for intimacy. In A. W. Chickering & Associates, The Modern American College (pp. 191-211). San Francisco: Jossey-Bass.

Freire, P. (1970). Pedagogy of the oppressed. New York: The Seabury Press.

French, J.R.P. & Raven, B. (1960). The bases of social power. In D. Cartwright & A.F. Zander (Eds.), Group Dynamics: Research and Theory (2nd ed.) (pp. 607-623). New York: Harper & Row.

Gross R. (1977). The lifelong learner. New York: Simon & Schuster.

Grotelueschen, A.D., Kenney, W.R., Cervero, R.M., & Harnisch, D.L. (1981, April). Professionals' reasons for participation in continuing education: Comparative findings from five professions. Paper presented at the annual meeting of The American Educational Research Association, Los Angeles, CA.

Holsti, O.R. (1969). Content analysis for the social sciences and humanities. Reading, MA: Addison-Wesley.

Houle, C.O. (1980). Continuing learning in the professions. San Francisco: Jossey-Bass.

Knowles, M.S. (1973). The adult learner: A neglected species. Houston, Texas: Gulf.

Knowles, M.S. (1972). Innovations in teaching styles and approaches based upon adult learning. Education for Social Work, 8, 32-39.

Knowles, M.S. (1980). The modern practice of adult education: From pedagogy to andragogy. Chicago: Association Press, Follett.

Knudson, R.S. (1980). An Alternative approach to the andragogy/pedagogy issue. Liflong Learning: The Adult Years, 3(8), 8-10.

Kolb, D. (1976). Learnng style inventory: Self-scoring test and interpretation booklet. Boston, McBer.

Krippendorff, K. (1980). Content analysis: An introduction to its methodology. Beverly Hils, CA: Sage Publications.

Lebel, J. (1978). Beyond andragogy to gerogogy. Lilong Learning: The Adult Years, 1,(9), 16-18; 25.

Long, H.B., Hiemstra, R. & Associates (1980). Changing approaches to studying adult education. San Francisco: Jossey-Bass.

McCants, L.S. (1981). 1984 anticipated. Lifelong Learning: The Adult years, 4(7), 10-11; 31.

Messick, S. & Associates. (1976). Individuality in learning. San Francisco: Jossey-Bass.

Parks, D.R. Adults in transition: Do educational programs respond? Lifelong Learning: The Adult Years, 6,(10), 8-9; 23, 24.

Peterson, D.A. (1983). Facilitating education for older learners. San Francisco: Jossey-Bass.

Pool, I. (1959). Trends in content analysis. Urbana, Ill.: University of Illinois Press.

Rockhill, K. (1982). Researching participation in adult education: The potential of the qualitative perspective. Adult Education, 33(1), 3-19.

Schaie, K.W. & Willis, S.L. (1978). Life-span development: Implications for education. In Review of Research in Education (Vol. 6). Itasca IL: F.E. Peacock.

Schuttenberg, E.M., Poppenhagen, B.W., & Gallagher, J.P. (1982, March). Learner preferences in continuing professional education. Paper presented at the annual meeting of the American Educational Research Association, New York, N.Y.

Schuttenberg, E.M., Gallagher, J.P., & Karger, M.J. (1983, April). Learner preferences in postsecondary education: A life phase comparison. Paper presented at the annual meeting of the American Educational Research Association, Montreal, Canada.

Appendix

Examples of Responses by Category

Category 1: Instructor knows best. The instructor possesses knowledge or expertise the learner does not have.

A. "We view the instructor as expert in teaching/learning in addition to his subject."

B. "The instructor is the expert and should determine content. Learning implies lack of knowledge. That's the reason for taking courses."

c. "Mother knows best."

Category 2: Instructor should be authoritative. The Instructor represents the educational institution, and, therefore, as part of that role, he or she should provide structure in order to promote efficiency of learning and to reflect the authority of the position.

A. "I believe the instructor is the leader and director of the course and his ideas should be followed."

B. I like his style since it is traditional."

C. "Since the instructor is in control of the class, it is his privilege and responsibility to establish procedures for evaluation."

Category 3: Students need structure. In order to learn effectively and to avoid inadequate or inefficient application to their studies, students need the guidance and direction of the instructor.

A. "I want a clearly spelled out course content and do not like unstructured courses."

B. "As a learner, I would tend to take the easiest objectives. I need the extra push of set objectives."

C. "I need to have a structured plan for me to follow."

Category 4: Make it useful. It is important for the students to tailor the learning process and outcomes to meet their own needs, goals, and values or to complement their current knowledge.

A. "An adult will direct his/her education based upon need, interest, and applicability in individual's circumstances."

B. "There may be specific areas of learning that the learners would like to focus on."

C. "The learner should be free to select the sequence in order to facilitate his/her own interest."

Category 5: Want to be involved. Students wish to be active rather than passive in the learning situation because involvement leads to better learning for adults.

A. "The instructor should know that much variation exists on how we learn . . . I learn best from a visual activity related approach - not all do!"

B. "I believe learners know best what methods work best for them in mastering content."

C. "I believe learners have a right to share in the decision/making."

Category 6: Instructor should be responsive. The role of an instructor who works with adult learners should emphasize flexibility in understanding and meeting the needs of the learners.

A. "The instructor should serve as a resource for the learner."

B. "Giving people choices makes them feel more responsible for their own learning."

C. "The instructor should be prepared to change methods because of needs."

Category 7: It all depends. Response may vary according to situational characteristics.

A. "My answer depends on the knowledge level of the learners and their learning needs."

B. "My answer would depend on the course being offered. Some do not lend themselves to joint development."

C. "Depends on class experience."

Category 8: Unknown. Responses in this category were not interpretable because of insufficient information provided, the inclusion of anecdotal material not related to the CDPS item, illogical sentence construction, or illegible handwriting.

Author Notes

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Footnotes

[1]Panel members were Arthur W. Chickering, Memphis State University; Elinor Greenberg, Council for the Advancement of Experiential Learning; Harold Hodgkinson, NTL Institute, Malcolm S. Knowles, Adult Education Consultant; and Rita P. Weathersby, University of New Hampshire.

Table 1

Distributions of Responses to the CDPS (N = 281)

	Responses Selected				
	Instructor-Centered 1	2	3	4	Learner-Centered 5
Item 1	61	47	126	42	4
(Objectives)	(22%)	(17%)	(45%)	(15%)	(1%)
Item 2	73	65	109	22	10
(Content)	(26%)	(23%)	(39%)	(8%)	(4%)
Item 3	138	19	95	23	3
(Sequence)	(50%)	(7%)	(34%)	(8%)	(1%)
Item 4	39	53	170	12	4
(Methods)	(14%)	(19%)	(61%)	(4%)	(1%)
Item 5	108	55	52	56	5
(Evaluation)	(39%)	(20%)	(19%)	(20%)	(2%)
Composite	419	239	552	155	26
	(30%)	(17%)	(40%)	(11%)	(2%)

Table 2

Project 60 Responses to the CDPS (N=165); Items by Sex

Item/Sex	Response Selected: Instructor-Centered 1	2	3	Learner-Centered 4	5	Chi-Square for Responses by Sex
1 (Objectives)						
Female	34 (42%)	12 (15%)	24 (30%)	8 (10%)	3 (4%)	2.3
Male	30 (42%)	13 (18%)	21 (30%)	3 (4%)	4 (7%)	(p<.689)
Total	64 (42%)	25 (16%)	45 (30%)	11 (7%)	7 (5%)	
2 (Content)						
Female	34 (43%)	18 (23%)	11 (14%)	10 (13%)	7 (9%)	10.5
Male	45 (65%)	8 (12%)	8 (12%)	2 (3%)	6 (9%)	(p<.033)
Total	79 (53%)	26 (17%)	19 (13%)	12 (8%)	13 (9%)	
3 (Sequence)						
Female	48 (60%)	5 (6%)	19 (24%)	6 (8%)	2 (3%)	5.1
Male	52 (74%)	4 (6%)	12 (17%)	1 (1%)	1 (1%)	(p<.276)
Total	100 (67%)	9 (6%)	31 (21%)	7 (5%)	3 (2%)	
4 (Methods)						
Female	21 (25%)	10 (12%)	40 (49%)	8 (10%)	2 (2%)	7.9
Male	30 (45%)	11 (16%)	21 (31%)	4 (6%)	1 (1%)	(p<.093)
Total	51 (34%)	21 (14%)	61 (41%)	12 (8%)	3 (2%)	
5 (Evaluation)						
Female	30 (38%)	13 (16%)	17 (22%)	15 (19%)	4 (5%)	14.02
Male	43 (64%)	7 (10%)	3 (4%)	10 (15%)	4 (6%)	(p<.007)
Total	73 (50%)	20 (14%)	20 (14%)	25 (17%	8 (5%)	
Composite	367	101	176	67	34	
	(49%)	(14%)	(24%)	(9%)	(5%)	

Table 3

Frequency and Percentage of Instructor-Centered Response Categories and Combinations for CDPS Items

Response Categories	Items											
	Objectives(1)		Content(2)		Sequence(3)		Methods(4)		Evaluation(5)		Total (1-5)	
	N	%	N	%	N	%	N	%	N	%	N	%
1	81	23	81	23	126	35	52	15	40	11	380	21
2	28	8	40	11	37	10	24	7	55	15	184	10
3	18	5	8	2	4	1	1	0	14	4	45	3
1 & 2	4	1	4	1	2	1	4	1	4	1	18	1
1 & 3	6	2	3	1	3	1	2	1	0	0	14	1
2 & 3	1	0	0	0	0	0	1	0	0	0	2	0
Totals	138	55	136	59	172	80	84	39	113	38	643	44

Table 4

Frequency and Percentage of Learner-Centered Response Categories and Combinations for CDPS Items

Response Categories	Items											
	Objectives(1)		Content(2)		Sequence(3)		Methods(4)		Evaluation(5)		Total (1-5)	
	N	%	N	%	N	%	N	%	N	%	N	%
4	41	11	30	8	2	1	0	0	5	1	78	4
5	33	9	28	8	26	7	84	23	71	19	242	13
6	6	2	16	5	18	5	34	10	11	3	85	5
4 & 5	0	0	2	1	0	0	1	0	0	0	3	0
4 & 6	2	1	2	1	0	0	0	0	0	0	4	0
5 & 6	0	0	0	0	1	0	6	2	1	0	8	0
Totals	82	33	78	34	47	22	125	58	88	45	420	29

Table 5

Frequency and Percentage of Mixed Combinations of Response Categories (Instructor Centered & Learner-Centered) for CDPS Items

Response Categories	Items: Objectives(1) N	%	Content(2) N	%	Sequence(3) N	%	Methods(4) N	%	Evaluation(5) N	%	Total (1-5) N	%
1 & 4	30	8	15	4	0	0	0	0	0	0	45	3
1 & 5	21	6	8	2	16	5	19	5	5	1	69	4
1 & 6	14	4	17	5	12	3	12	3	6	2	61	3
2 & 4	13	4	3	1	0	0	0	0	0	0	16	1
2 & 5	2	1	5	1	1	0	6	2	5	1	19	1
2 & 6	8	2	15	4	10	3	9	3	6	2	48	3
3 & 4	2	1	3	1	0	0	0	0	0	0	5	0
3 & 5	4	1	3	1	2	1	3	1	3	1	15	1
3 & 6	0	0	0	0	0	0	0	0	3	1	3	0
Totals	94	37	69	30	41	19	49	23	28	14	281	19

Table 6

Percentage of Response by Category for the Younger and Older Samples

Response Categories	Younger (N=281) (Mean Age 34.8)	Older (N=165) Mean age 68.4)	Total Group
Instructor-Centered			
1	20	25	21
2	11	10	10
3	2	3	3
Learner-Centered			
4	6	2	4
5	16	9	13
6	5	4	5

Table 7

Significance Levels of ANOVAs Comparing Mean Likert Scale Responses for Instructor-Centered, Mixed, and Learner-Centered Respondent Groupings

CDPS Item	Mean Likert Scale Score			p
	Instructor-Centered	Mixed Response	Learner-Centered	
Objectives (1)	1.6*	2.8*	3.3*	.0001
Content (2)	1.5*	2.7*	3.1*	.0001
Sequence (3)	1.3*	2.8	3.0	.0001
Methods (4)	1.9*	2.7	2.	.0001
Evaluation (5)	1.3*	2.6*	3.2*	.0001

*Mean score differed significantly from other mean scores, as shown by Duncan Multiple Range Test.

Table 8

Rationales from Literature Compared to Categories Found in Research Study

Literature Rationales	Research Categories
Instructor-Centered	
1. Learned dependence on instructor as "Student role."	2
2. Low self-concept of intellectual abilities.	1
3. Negative stereotypes of older persons' learning abilities	None
4. Perceptions of instructors' superior knowledge	1
5. Intimidation by the educational system	None
6. Conservative philosophy (based on Depression) culture	2
7. Consumer mindset - demanding instructor to transmit knowledge	3
8. Prior success with instructor-directed learning experiences	None
9. Psychological fixation on earlier instructor-directed learning experiences	2
Learner-Centered	
10. Adults' high self-concept of learning abilities	5
11. Adults' desire for self direction	5
12. Prior success with collaborative learning experiences	None
13. Need to achieve personal or professional goals	4